

an accurate gauge or end-of-train device at the rear of the train, a 15-psi service brake pipe reduction shall be made; and

(3) An inspection shall be made to determine that the brakes on each car apply and remain applied until the release is initiated by the controlling locomotive. A car found with brakes that fail to apply or remain applied may be retested and remain in the train if the retest is conducted as prescribed in § 232.205(c)(4); otherwise, the defective equipment may be moved only pursuant to the provisions contained in § 232.15, if applicable;

(b) Cars added to transfer trains en route shall be inspected pursuant to the requirements contained in paragraph (a) of this section at the location where the cars are added to the train.

(c) If a train's movement will exceed 20 miles or is not a transfer train as defined in § 232.5, the train shall receive a Class I brake test in accordance with § 232.205 prior to departure.

[66 FR 4193, Jan. 17, 2001, as amended at 67 FR 17583, Apr. 10, 2002]

§ 232.217 Train brake tests conducted using yard air.

(a) When a train air brake system is tested from a yard air source, an engineer's brake valve or a suitable test device shall be used to provide any increase or reduction of brake pipe air pressure at the same, or slower, rate as an engineer's brake valve.

(b) The yard air test device must be connected to the end of the train or block of cars that will be nearest to the controlling locomotive. However, if the railroad adopts and complies with written procedures to ensure that potential overcharge conditions to the train brake system are avoided, the yard air test device may be connected to other than the end nearest to the controlling locomotive.

(c) Except as provided in this section, when yard air is used the train air brake system must be charged and tested as prescribed by § 232.205(c) and when practicable should be kept charged until road motive power is coupled to train, after which, a Class III brake test shall be performed as prescribed by § 232.211.

(1) If the cars are off air for more than four hours, the cars shall be retested in accordance with § 232.205(c) through (f).

(2) At a minimum, yard air pressure shall be 60 psi at the end of the consist or block of cars opposite from the yard test device and shall be within 15 psi of the regulator valve setting on yard test device.

(3) If the air pressure of the yard test device is less than 80 psi, then a brake pipe leakage or air flow test shall be conducted at the operating pressure of the train when the locomotives are attached in accordance with § 232.205(c)(1).

(d) Mechanical yard air test devices and gauges shall be calibrated every 92 days. Electronic yard test devices and gauges shall be calibrated annually. Mechanical and electronic yard air test devices and gauges shall be calibrated so that they are accurate to within ± 3 psi.

(e) If used to test a train, a yard air test device and any yard air test equipment shall be accurate and function as intended.

[66 FR 4193, Jan. 17, 2001, as amended at 67 FR 17583, Apr. 10, 2002]

§ 232.219 Double heading and helper service.

(a) When more than one locomotive is attached to a train, the engineer of the controlling locomotive shall operate the brakes. In case it becomes necessary for the controlling locomotive to give up control of the train short of the destination of the train, a Class III brake test pursuant to § 232.211 shall be made to ensure that the brakes are operative from the automatic brake valve of the locomotive taking control of the train.

(b) When one or more helper locomotives are placed in a train, a visual inspection shall be made of each helper locomotive brake system to determine that the brake system operates as intended in response to a 20-psi reduction initiated from the controlling locomotive of the train. A helper locomotive with inoperative or ineffective brakes shall be repaired prior to use or removed from the train.

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(c) If a helper locomotive utilizes a Helper Link device or a similar technology, the locomotive and device shall be equipped, designed, and maintained as follows:

(1) The locomotive engineer shall be notified by a distinctive alarm of any loss of communication between the device and the two-way end-of-train device of more than 25 seconds;

(2) A method to reset the device shall be provided in the cab of the helper locomotive that can be operated from the engineer's usual position during operation of the locomotive. Alternatively, the helper locomotive or the device shall be equipped with a means to automatically reset the device, provided that the automatic reset occurs within the period time permitted for manual reset of the device; and

(3) The device shall be tested for accuracy and calibrated if necessary according to the manufacturer's specifications and procedures every 365 days. This shall include testing radio frequencies and modulation of the device. A legible record of the date and location of the last test or calibration shall be maintained with the device.

[66 FR 4193, Jan. 17, 2001, as amended at 67 FR 17584, Apr. 10, 2002]

Subpart D—Periodic Maintenance and Testing Requirements

§ 232.301 Scope.

This subpart contains the periodic brake system maintenance and testing requirements for equipment used in freight and other non-passenger trains.

§ 232.303 General requirements.

(a) *Definitions.* The following definitions are intended solely for the purpose of identifying what constitutes a shop or repair track under this subpart.

(1) *Shop or repair track* means:

(i) A fixed repair facility or track designated by the railroad as a shop or repair track;

(ii) A fixed repair facility or track which is regularly and consistently used to perform major repairs;

(iii) Track which is used at a location to regularly and consistently perform both minor and major repairs where the railroad has not designated a cer-

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tain portion of that trackage as a repair track;

(iv) A track designated by a railroad as a track where minor repairs will be conducted or used by a railroad to regularly and consistently perform minor repairs during the period when the track is used to conduct major repairs; however, such trackage is considered a shop or repair track only for each car receiving major repairs on such trackage and not for a car receiving only minor repairs; and

(v) The facilities and tracks identified in paragraphs (a)(1)(i) through (a)(1)(iv) shall be considered shop or repair tracks regardless of whether a mobile repair vehicle is used to conduct the repairs.

(2) *Major repair* means a repair that normally would require greater than four person-hours to accomplish or would involve the use of specialized tools and equipment. Major repairs include such activities as coupler replacement, draft gear repair, and repairs requiring the use of an air jack but exclude changing wheels on intermodal loading ramps either with or without an air jack.

(3) *Minor repair* means repairs, other than major repairs, that can be accomplished in a short period of time with limited tools and equipment. Minor repairs would include such things as safety appliance straightening, handhold replacement, air hose replacement, lading adjustment, and coupler knuckle or knuckle pin replacement.

(b) A car on a shop or repair track shall be tested to determine that the air brakes apply and remain applied until a release is initiated.

(c) A car on a shop or repair track shall have its piston travel inspected. For cars equipped with 8½-inch or 10-inch diameter brake cylinders, piston travel shall be within 6 to 9 inches. If piston travel is found to be less than 6 inches or more than 9 inches, it must be adjusted to nominally 7½ inches. For cars not equipped with 8½-inch or 10-inch diameter brake cylinders, piston travel shall be within the piston travel stenciled or marked on the car or badge plate.

(d) Before a car is released from a shop or repair track, a qualified person shall ensure: